

NOVITATES ZOOLOGICAE

Vol. XXXIX.

OCTOBER 1933.

No. 1.

ON THE GEOMETRID GENUS *PHRYGIONIS* HB.

By LOUIS B. PROUT.

THIS attractive genus has apparently received much less attention than might have been expected. In arranging the material in the Tring Museum, I have found several forms unnamed or wrongly determined and have been compelled, for my own guidance, to make some preliminary investigations. The present article, though not claiming to be a thorough systematic revision, embodies the principal results of these investigations and may, it is hoped, pave the way for some more exhaustive work.

The genus *Phrygionis* was erected by Hübner (*Verz. bek. Schmett.*, p. 307) for *cultaria* Hb. and two non-Geometrids, and was legitimately restricted by Warren (*Nov. Zool.* i, 399) to *cultaria*.¹ *Eulepidotus* H.-Sch. (*Samml. Aussereur. Schmett.*, i, 28, 41), admittedly a transcription (inaccurate) of *Eulepidotis* Hb., was based on a confusion of *politia* Cram. (now *Nepheloleuca*) with *polita* Cram. (now *Phrygionis*) and has no possible standing. *Byssodes* Guen. (*Spec. Gén. Lép.*, ix, 399) is purely a synonym of *Phrygionis*, its author having, as usual, ignored the *Verzeichniss* of Hübner. I have little doubt that Druce will prove to have been right in merging with it (*Biol. Centr.-Amer., Lep. Het.*, ii, 98-100, *Byssodes*) the group of white species, with longer tail to the hindwing, exemplified by *platinata* (Guen., *Spec. Gén. Lép.*, ix, 33; Oberth., *Et. Lép. Comp.*, v, fig. 482); but as this has been provided with a separate generic name (*Ratiaria* Walk., 1861) and represents a distinct section, I have abstained from introducing it into the present study—the more so since its inclusion would have led me still farther afield into systematics, perhaps even to an exploration of the whole of the so-called *Palyadinae*.

It is curious that Warren, in the article above cited, has transferred *Phrygionis* to his *Urapteryginae*, while correctly indicating (*l.c.*, p. 403) that the subfamily *Palyadinae*—tribe of the *Geometrinae* in the comprehensive Lederer-Meyrick system—"is characterized by the absence of the frenulum." Guenée, whom Warren approximately follows, places it correctly in the *Palyadinae*, and I surmise that Warren was misled as to the affinities by the remarkably *Ourapteryx*-like colour and markings of the *Ratiaria* section. The phylogeny of the great Geometrine stirps—if indeed it be even a single stirps—is still very obscure,

¹ Butler's use of the name in *Tr. Ent. Soc. Lond.* 1879, p. 30, is fortunately entirely non-restrictive.

but I suspect that the *Palyas* group has arisen from the *Cabera* group by the loss of the frenulum.

Phrygionis is recognizable at a glance by its facies, in particular by the metallic proximal edging of the pale transverse bands and the partly metallic subterminal or terminal spot in front of R^3 of the hindwing; but the entire structure is pretty homogeneous. Face nearly smooth, or with small cone. Palpus shortish-moderate, upcurved. Tongue well developed. Antenna of ♂ shortly (only in *flavilimes* and *sumptuosaria* more) bipectinate, the pectinations neither continuing to the base nor to the apex. Legs long and slender. Thorax and abdomen not erected; abdomen in ♂ provided, except in *flavilimes* and *sumptuosaria*, with a pair of hair-pencils arising from near base of 6th tergite. Wings ample, smooth-scaled, except for the somewhat raised metallic markings; forewing smooth-margined, SC^1 from cell, anastomosing with C, SC^{2-5} stalked from much before end of cell, SC^5 separating long before SC^2 ; hindwing bent or shortly tailed in middle; humeral angle strong, frenulum wanting, C (after its strong basal angulation) approximated to SC to near middle of cell, then rapidly diverging, SC^2 separate, R^2 entirely wanting, M^1 separate.

A few of the species were known to the old authors, but their naming was on the whole very unfortunate. Of the pre-Guenée names, only *argentata* Drury (*Ill. Nat. Hist.*, ii, Index and p. 25, t. xix, fig. 2, 1773, Jamaica) and *cultaria* Hb. (*Verz. bek. Schmett.*, p. 307, nom. nov., pro *politata* Stoll) are even potentially valid. *Phalaena polita* Cram. (*Util. Kap.*, iii, 152, t. 276F, 1780, Surinam), though described as a "*Phal. Geom.*" and indexed as *polyta*, must, according to the present methods of registration, be considered as preoccupied by *Phalaena (Noctua) polita* Cram. (*op. cit.*, ii, 35), the indexing being presumably a misprint, not an intentional escape from homonymy, and the original spelling being retained by Stoll (*Essai*, p. 26, No. 51); *Ph. decorata* Fb. (*Spec. Ins.*, ii, 256, 1781, Jamaica) was a homonym, but I believe also synonymous with *argentata* Drury; *Ph. politata* Stoll (*Aanh. Util. Kap.*, p. 143, t. xxxi, fig. 4, 1790, "Surinam") was a misspelling and misidentification, being assumed to represent the ♂ to *politata* Cram., but it received a valid new name from Hübner (see above). Curiously enough, this last-cited figure, like Guenée's *paradoxata*, looks Antillean rather than South American, perhaps least unlike a badly coloured, badly shaped representation of *argentata* Drury, with postmedian line too proximal and the orange border of the hindwing narrowed à la *cruorata*; indeed I have no knowledge of any continental *Phrygionis* which has both the metallic spots of the hindwing placed on red patches, and this is one of the few characters on which the description and the figure are quite explicit. I can only suggest, therefore, that the figured specimen was of uncertain origin and that the words "and inhabits Surinam" were added to the description on the assumption that it was conspecific with *politata* Cram.

The Cuban species subsequently figured as *cultaria* (Hb.-Gey., *Zutr. Exot. Schmett.*, iv, 34, figs. 751-2, 1832) was obviously not that of the *Verzeichniss*, but may well be a small ♀ of the one that was later named *sororcula* by Warren, or possibly a dull *fratercula*. The "*cultaria* Geyer" with which Strecker compared his *argentistriata*, whatever it was, was certainly not "vera"; perhaps it was the common and widely distributed species which has generally been called *privignaria* or *paradoxata (incolorata* Prout subsp.).

Even Guenée's two "new species" (1858) are more than ordinarily unhelpful

in our quest of a stable nomenclature; his *Byssodes paradoxata* (*Spec. Gén. Lép.*, ix, 400, "Brésil (?)") being a curious little ♂, unlike any other specimen which I have seen, the confluent red marking of the hindwing so Antillean that I suggest it may be a lost Haitian species close to *sororcula* Warr., just possibly a form of *sororcula*¹; his *B. privignaria* (*t.c.*, p. 401, Martinique) a lost ♂ from coll. Marchand not identifiable with anything now known either from the West Indies or elsewhere. He does us a service, however, in providing a new name *politulata* (*t.c.*, p. 400) for the preoccupied *polita* of Cramer; although he cites "*politata* Cram." in mistake for *polita* and discusses Stoll's figure before Cramer's on p. 401 (doubtless because it was the ostensible ♂), the application of his new name is unequivocal, for he heads the species "*Byssodes politulata* Cram.," and it is well known that with him in such cases the new name is credited to the *original* author (cf. No. 161, "*Sicya sublimaria* Harr.").

The subsequently described species are more straightforward, although *sororcula* Warr. has not yet reached our British collections, so far as known to me. The following is a chronological list (original generic designation added when this was not *Phrygonis*):

- 1861. *appropriata* Walk., *List Lep. Ins.*, xxii, 619 (*Byssodes*) (Mexico).
- 1861. *metaxantha* Walk., *op. cit.*, xxiii, 828 (*Ratiaria*) (Bogota) (pr. f.).
- 1876. *argentistriata* Streck., *Proc. Acad. Nat. Sci. Phil.*, xxviii, 152 (Florida).
- 1882. *cerussata* Grote, *Pap.*, ii, 101 (*Byssodes*) (Florida) (pr. syn.).
- 1882. *obrussata* Grote, *Can. Ent.*, xiv, 111 (err. pro *cerussata*).
- 1886. *sumptuosaria* Möschl., *Abh. Senck. Ges.*, xiv (3), 69, f. 25 (*Byssodes*) (Jamaica).
- 1904. *modesta* Warr., *Nov. Zool.*, xi, 91 (Minas Geraes).
- 1905. *cruorata* Warr., *Nov. Zool.*, xii, 345 (Dominica).
- 1906. *fratercula* Warr., *Proc. U.S. Mus.*, xxx, 499 (Cuba) (*argentistriata* subsp. vel syn.).
- 1906. *sororcula* Warr., *t.c.*, p. 500 (Cuba).
- 1907. *flavilimes* Warr., *Nov. Zool.*, xiv, 260 (Carabaya).
- 1910. *incolorata* Prout, *Tr. Ent. Soc. Lond.*, 1910, p. 286 ("*paradoxata* subsp.") (Buenos Aires).

By an extraordinary series of mischances, the most widely distributed (and by far the commonest) species has not yet received a legitimate name, with the exception of *incolorata* Prout, given to its southern race as recently as 1910. It has been consistently labelled *privignaria* by Schaus and Warren, as well as by Druce in the "Biologia" collection, but apart from disagreements with Guenée's description (colour and shape), it does not seem to occur in the West Indies proper, i.e. apart from Trinidad; on geographical and other grounds I considered myself safer in identifying it with *paradoxata* Guen., but the type of the latter has not justified my determination. I therefore see no alternative to the imposition of a new name, though I shall be only too glad if it can be demonstrated that Stoll's figure (t. xxxi, 4) is a representation (almost incredibly bad) of the species under discussion, which is well known from Surinam, or that this does occur on Martinique and that Guenée's indication of the forewing shape ("un peu coudées")

¹ Since this was written I have, through the kindness of Prof. E. B. Poulton, been able to examine the Oxford Museum *Phrygonis* and find 2 ♀♀, one without label, the other "So. Domingo," agreeing perfectly together and only differing from Guenée's type in their rather larger size; my suspicion is thus thoroughly confirmed.

between R³ and M¹) means next to nothing—or “supérieures” here a misprint for “inférieures”—so that one of the derelict names may be rehabilitated.

***Phrygionis incolorata restituta* subsp. n.**

“*Phrygionis privignaria* Guen.” Druce, *Biol. Centr. Amer., Lep. Het.*, ii, 92 (1892) (nec Guen.).

“*Phrygionis paradoxata* Guen.” Prout, *Tr. Ent. Soc. Lond.* 1910, p. 286 (1910) (nec Guen.).

Differs from *i. incolorata* Prout (*l.c.*, p. 287), as indicated, by the presence on the hindwing of a narrow orange band (or thick line) outside the silvery line which bounds the postmedian band distally, also a more or less developed terminal line of the same orange tint. From all the South American *Phrygionis* it is readily distinguished by the purer grey colour (a little darker and less yellow-tinged than in *argentata*), the complete series of metallic spots at proximal edge of hindwing band, and the fine yellow rays which run inward from the said band along the veins. Hindwing at least as weakly angled as in *politulata* Guen.

Mexico to Rio Janeiro, very generally distributed except at high altitudes. Type ♂ from San Esteban, Venezuela, in coll. Tring Mus.

The following species and forms likewise require naming.

***Phrygionis moeschleri* sp. n.**

“*Eulepidotus paradoxata* Guen.,” Möschl., *Abh. Senck. Ges.*, xvi, 245 (1890) (nec Guen.).

Paler than *cruorata* Warr. (1905), of which it may probably be a race (about the colour of *argentata*); forewing otherwise very similar to that of *cruorata*, inner band a little more sinuous, outer band perhaps broader; hindwing with the outer part of the band somewhat broadened, the white line which bounds it distally rather clear, the terminal orange markings a little less reddish (more approaching the colour of those of *argentata*), more interrupted at SC² and at R¹.

Porto Rico, the type ♀ in coll. Brit. Mus., ex coll. Möschler.

***Phrygionis gemmea* sp. n.**

♂♀, 31–40 mm. Nearly always smaller than *argentata* (Drury, 1773), hindwing with the angle at R³ appreciably blunter. Ground-colour purer grey without the suspicion of yellowish which is discernible in *argentata*.—*Forewing* with the yellow bands a little paler, the antemedian more sinuous, approaching the form of that of *argenticstriata* Streek., the postmedian a little broader, with the metallic costal markings of its centre generally less developed but with its white distal line naereous (in *argentata* dead white).—*Hindwing* with the band similarly broadened, the fine contained posterior line slighter than in *argentata*, the metallic spots close to midtermen accompanied by less of the red shading, in particular without any connecting them distally, the spots, indeed, being set on a more definite projection of the pale colour of the band than in *argentata*.

Jamaica, not rare, the type ♂ in Mus. Tring.

The determination of Drury's very crude figure would be a matter of some difficulty but that it represents a ♀ of extreme size (“almost 1¼ inch”); the basal yellow band of the forewing is omitted, as also the red accompaniment of the spots of the hindwing, the wing-shape is quite inaccurate and the postmedian band very inexact; but the antemedian and the strong costal mark in middle of postmedian favour the larger species. The type must, I suspect, have been in bad condition.

Phrygonis dominica sp. n.

♀, 40 mm. Near *argentata* Drury and *gemmea* Prout (*supra*), wings perhaps a trifle narrower, the hindwing with termen decidedly more gibbous than in the ♀ of either (some ♂♂ of *gemmea* approach this shape), but not actually pointed at R³ as in *argentata*.—*Forewing* perhaps slightly less pale than in either; antemedian as in *argentata*; postmedian even broader than in *gemmea*, or at least broader in its anterior half, its white distal element not appreciably nacreous.—*Hindwing* with the dividing line of the yellow band very well developed, the orange band which succeeds the outer silvery line well developed, in anterior half not subinterrupted (as in *argentata*) nor sube confluent with the orange terminal line (as in *gemmea*), the posterior half much weaker, chiefly *proximal* to the silvery line; metallic spots close to termen both accompanied by red shading proximally, the posterior one less small than in *gemmea*, their red terminal connection (compare *argentata*) wanting.

Dominica, 1 ♀ in coll. Brit. Mus.

This should be very near the lost *privignaria* of Guenée, especially if the forewing of that was malformed or badly described; but the white of the forewing is not nacreous and both the spots of the hindwing are surmounted with red; moreover, I should not call the ground-colour “café-au-lait.”

Phrygonis sestertiana sp. n.

♂♀, 40–41 mm. Closely similar to *politulata* Guen., which it evidently represents in British Honduras. Ground-colour a little less grey, more inclining to light pinkish cinnamon or pinkish buff, the transverse metallic markings more bronzy, bands of forewing slightly more oblique, the distal white element of the postmedian narrowed; in addition to the two characteristic longitudinal streaks (before and behind SC^o of the forewing) there is a much shorter one between R¹ and R² near (but not reaching) the termen.

British Honduras, a pair in Mus. Tring, the type ♂ from Orange Walk, 1917.

Phrygonis stenotaenia sp. n.

♂, 41 mm.; ♀, 42–44 mm. Rather larger than *politulata* Guen., darker, a little warmer, the orange tint of the apical region of the forewing consequently rather less differentiated; hindwing more angled (tailed), about as in *appropriata* Walk.; longitudinal silvery marks of forewing as in *politulata*; bands extremely slender, almost as warmly coloured as in *appropriata*, the postmedian at least as oblique as in *sestertiana*, without the distal white element, that of the hindwing considerably nearer the termen than in *appropriata*; metallic markings between subbasal and antemedian of forewing close to costa perhaps less developed than in *politulata*; tail-spot of hindwing considerably less small; hindwing beneath with the terminal dark band as strong as in *appropriata*, but narrower.

Carabaya, S.E. Peru: La Oroya, 3,100 feet, September 1904, type ♂, August 1904, allotype ♀, both in Mus. Tring (G. Ockenden). Bolivia: Santa Cruz, 1926 (J. Steinbach), a ♀ in the same collection.

As **Ph. s. isthmia** subsp. n. I describe a provisional race from Panama, the ♂ expanding 42–43 mm., perhaps slightly narrower-winged, the postmedian on the forewing slightly less oblique, on the hindwing less approximated to termen, the tail-spot of the hindwing with same red edging proximally. The type ♂, in addition, is a little darker (duller) than *s. stenotaenia*, both above and beneath,

and neither example shows any metallic scaling proximally to the postmedian of the hindwing in front of R^3 , as is the case in both the Carabaya *stenotaenia*, though not in the Bolivian.

Panama: Volcan de Chiriqui, 2,000–3,000 feet (type); Caldera, a more *stenotaenia*-coloured ♂, with the postmedian of the forewing less extremely narrowed than in any other known example of the collective species; both collected by Champion and left undescribed by Druce.

As **Ph. s. miura** subsp. n. I describe another provisional form (? sp. div.). Size and shape of forewing about as in *s. stenotaenia*, hindwing slightly less tailed than in the other forms, merely with a moderately sharp angle (approaching a right angle) at R^3 . Ground-colour a little darkened, but warmer (more cinnamon-tinted) than in the type of *s. isthmia*, postmedian line about as in *s. isthmia*, tail-spot of hindwing smaller—sometimes almost as small as in *politulata* Guen. Underside rather dusky, with the darker border of the hindwing rather broad but vague.

Guatemala: Tamahu, Vera Paz (Champion), type ♀, discovered in Druce's series of *appropriata* Walk. Honduras: La Cambre (J. Lienhart), a rather worn ♂ in the Joicey collection.

Phrygonis modesta marta subsp. n.

♂♀, 40–48 mm. Generally larger than *m. modesta* Warr., somewhat paler and less fawn-coloured, the "luteous" marginal area of the hindwing in consequence better contrasted, metallic markings on the whole a little stronger, especially the "tail-spot" of the hindwing.

Colombia: Onaca, Santa Marta (C. Engelke), the type series of 7 ♂♂, 6 ♀♀ in coll. Tring Mus.; Sierra del Libane, Minca and Don Amo (Magdalena) (H. H. Smith), in coll. Joicey, a good series.

Phrygonis amblopa sp. n.

♂, 39–49 mm.; ♀, 47–49 mm. Near *appropriata* Walk. (1861), particularly in the shape of the hindwing and its rather large tail-spot. Much duller, especially the hindwing—forewing with less fawn suffusion, hindwing without any orange suffusion distally; postmedian band nearly always very narrow, sometimes almost obsolete, its colouring pale, only becoming orange-tinted on posterior half of hindwing; antemedian of forewing just appreciably curved or bent at SM^2 , postmedian more oblique than in *appropriata*, thus diverging more from antemedian, that of the hindwing slightly more distally placed than in the ally; fringes almost white; the anterior silvery half-line close to termen of hindwing slenderer and less white than in *appropriata*, tail-spot with the non-metallic part red or red-brown, not black. Underside paler but equally dull and devoid of any orange suffusion.

Santa Catharina, S. Brazil: Jaragua do Sul, 12 ♂♂, 3 ♀♀ (including the type ♂) and Neu Bremen, Rio Laeiss, 1 ♂, all in Mus. Tring, received from F. Hoffmann.

A series in various collections from Castro, Parana, and one or two from São Paulo (E. D. Jones), oftener small and with slightly more of the ground-tint of *appropriata*, together with a less narrow postmedian band, must be provisionally referred here, probably a race, but the two smallest Santa Catharina ♂♂ share

with them these characters, while the only small Santa Catharina ♀ is of the extreme *amblopa* form and the largest ♂ from that locality is an extremely handsome broad-banded aberration, while the series furnishes some transitions. I therefore treat the variations as individual, although the possibility is not excluded, in view of the enormous richness of the Neotropical Geometrid fauna, that we may be dealing with two distinct species.

The range of the forms, so far as I have yet recorded, is as follows :

1. *Ph. i. restituta* Prout. Mexico to Rio Janeiro.
Ph. i. incolorata Prout. Sao Paulo to Paraguay and Buenos Aires.
2. *Ph. moeschleri* Prout. Porto Rico.
3. *Ph. cruorata* Warr. Dominica.
4. *Ph. argentata* Drury (= *decorata* Fb. = ? ? *cultaria* Hb. [*politata* Stoll, err. det.]). Jamaica.
5. *Ph. gemnea* Prout. Jamaica.
6. *Ph. privignaria* Guen. Martinique.
7. *Ph. dominica* Prout. Dominica.
8. *Ph. sororcula* Warr. (= ? *cultaria* Hb.-Gey. [nec Hb.]). Cuba.
9. *Ph. paradoxata* Guen. Haiti.
10. *Ph. a. argentistriata* Streck. Florida, Bahamas.
Ph. a. fratercula Warr. (? syn.). Cuba.
11. *Ph. sestertiana* Prout. British Honduras.
12. *Ph. s. stenotaenia* Prout. S.E. Peru, Bolivia.
Ph. s. isthmia Prout. Panama.
Ph. s. miura Prout (? sp.). Guatemala, Honduras.
13. *Ph. politulata* Guen. Trinidad, Guianas, Pernambuco, Bahia, E. Bolivia.
14. *Ph. m. modesta* Warr. S.E. Brazil, Paraguay, Entre Rios.
Ph. m. marta Prout. Colombia.
15. *Ph. amblopa* Prout. S. and S.E. Brazil.
16. *Ph. appropriata* Walk. Mexico to W. Ecuador.
form. *metaxantha* Walk. Bogota, N.W. Venezuela, Peru, Bolivia, ? Costa Rica (trans.).
17. *Ph. flavilimes* Warr. Peru.
18. *Ph. sumptuosaria* Möschl. Jamaica.

The following key will give a clue to my interpretation of the forms ; a very few of the puzzling "*amblopa*" of S.E. Brazil develop traces of the silvery longitudinal streaks of the *politulata* group, but otherwise I have found the key workable for all the material examined.

- | | |
|---|---------------------------------------|
| 1. Forewing with termen elbowed in middle | <i>privignaria</i> Guen. ¹ |
| Forewing with termen not elbowed in middle | 2 |
| 2. Metallic longitudinal streaks in cellules 6 and 7 of forewing | 3 |
| No metallic longitudinal streaks in cellules 6 and 7 of forewing | 5 |
| 3. Postmedian band narrow, without white distally ; hindwing tailed | <i>stenotaenia</i> Prout. |
| Postmedian band broader, on forewing white distally ; hindwing not tailed | 4 |

¹ Teste Guené ; unknown to me.

4. A short additional metallic streak in cellule 5 of
forewing *sestertiana* Prout.
No short additional metallic streak in cellule 5 of
forewing *politulata* Guen.
5. Hindwing rarely tailed, its band pale yellow or obso-
lescent, tail-spot with non-metallic part reddish or
very small 6
Hindwing tailed, its band predominantly bright
orange, tail-spot with the non-metallic part black 16
6. Postmedian of forewing with metallic edging distally
(5 metallic lines) *sumptuosaria* Möschl.
Postmedian of forewing without metallic edging
distally (at most 4 metallic lines) 7
7. Band of hindwing emitting yellow vein-streaks
proximally 8
Band of hindwing not emitting yellow vein-streaks
proximally 15
8. Antemedian band strongly incurved at fold 9
Antemedian band not or scarcely incurved at fold 11
9. Darkish cinnamon-drab, silver line of hindwing bordered
distally with orange *argentistriata* Streck.¹
Not cinnamon-drab, silver lines of hindwing not thus
bordered 10
10. Band of hindwing yellow as far as the silvery outer
line *gemmea* Prout.
Band of hindwing only narrowly yellow (adjoining
the metallic proximal spots) *moeschleri* Prout.²
11. Hindwing with midterminal spots red, distally con-
fluent (V-shaped or L-shaped) *paradorata* Guen.
and (subsp. ?) *sororcula* Warr.
Hindwing with midterminal spots not so 12
12. Band of hindwing yellow as far as the nacreous outer
line 13
Band of hindwing only narrowly yellow (adjoining
the metallic proximal spots) 14
13. Hindwing anteriorly with orange terminal blotches *argentata* Guen.
Hindwing anteriorly with orange subterminal broad
band and terminal lines *dominica* Prout.
Hindwing anteriorly without orange, or only with
subterminal and terminal lines *incolorata* Prout.
and subsp. *restituta* Prout.
14. Darker, at termen of hindwing with the anterior
orange band-like *cruorata* Warr.
Light, at termen of hindwing with the anterior orange
macular *moeschleri* Prout.³

¹ If *fratercula* Warr. is separable racially, I have not sufficient material before me to give absolutely constant differences; perhaps an intensification of the dark markings is significant, at least as regards the fine outlines of the yellow vein-streaks of the hindwing and the hindmarginal spot which bounds the antemedian distally on the forewing.

² This species is keyed twice, on account of the equivocal form of the antemedian band.

15. Dark grey, hindwing tailed, tail-spot large, predominantly reddish *amblopa* Prout.
 Less dark, hindwing bluntly bent, tail-spot small, wholly metallic *modesta* Warr.
16. Yellow of fringe encroaching on wings, proximally edged with blackish; metallic spots of hindwing continuing forward to SC² *flavilimes* Warr.
 Yellow of fringe rarely encroaching on wings, proximally not edged with blackish; metallic spots of hindwing ceasing anteriorly at radial fold 17
17. Orange band of hindwing suffusing proximally, also tinging the underside (f.) *metaxantha* Walk.
 Orange band of hindwing not or scarcely suffusing proximally and not tinging the underside (f.) *appropriata* Walk.
-